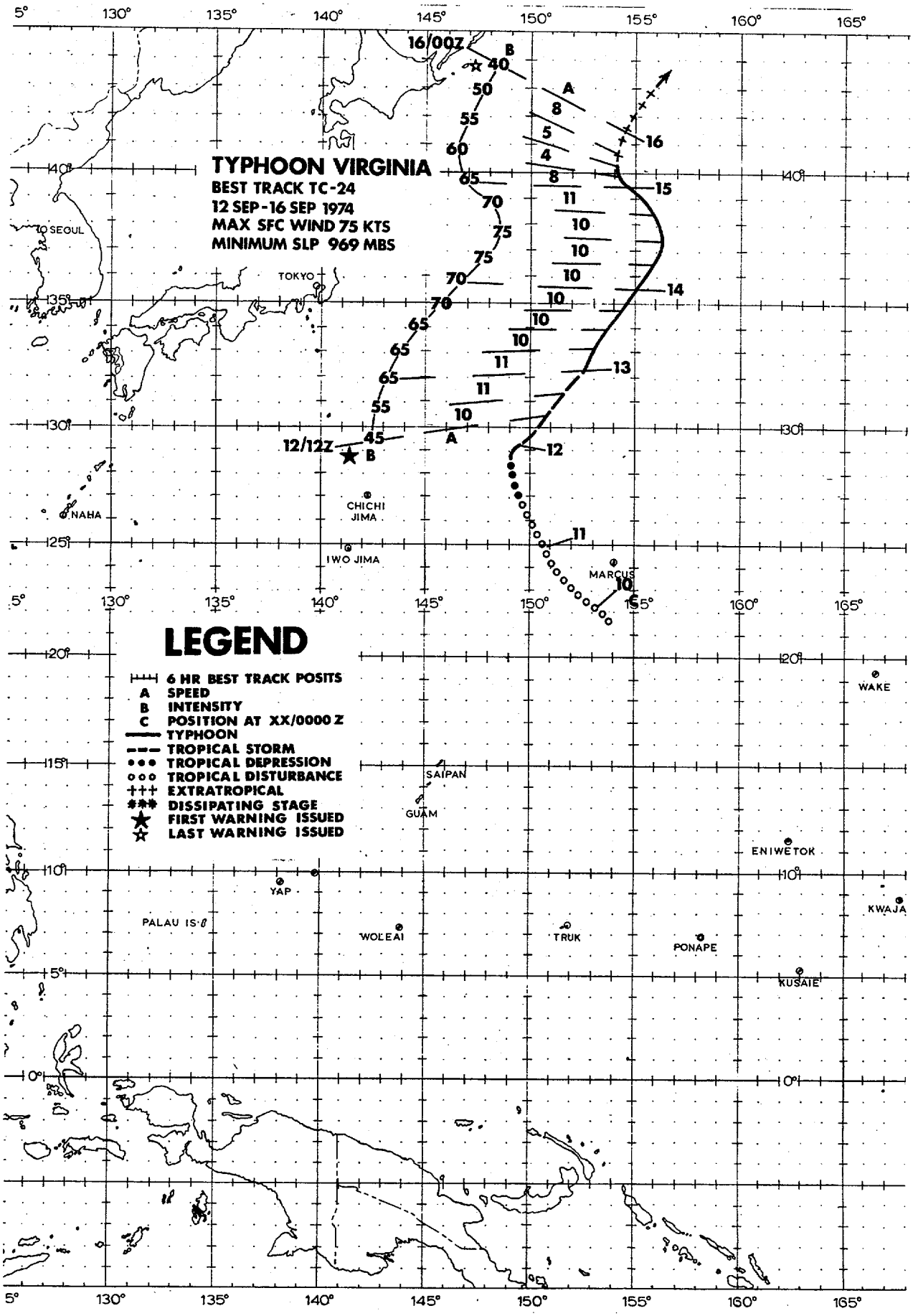
TYPHOON VIRGINIA
BEST TRACK TC-24
12 SEP-16 SEP 1974
MAX SFC WIND 75 KTS
MINIMUM SLP 969 MBS
16/00Z
12/12Z
TO SEOUL
TOKYO
NAHA
CHICHI JIMA
IWO JIMA
MARCUS
WAKE
SAIPAN
GUAM
ENIWETOK
YAP
PALAU IS
WOLEAI
TRUK
PONAPE
KUSAIE
KWAJA
LEGEND
6 HR BEST TRACK POSITS
A SPEED
B INTENSITY
C POSITION AT XX/0000 Z
TYPHOON
TROPICAL STORM
TROPICAL DEPRESSION
TROPICAL DISTURBANCE
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED

Developing from a disturbance initiated by an upper tropospheric low, Virginia began to display increasing organization in satellite data early on the 11th, 200 nm west of Marcus Island. The circulation advanced northward, shifting to a northeast course and developed tropical storm force winds on the 12th. (Figure 4-16) By the time aircraft reconnaissance was conducted on Virginia late on the 13th, winds had increased to typhoon intensity. Flight level (700 mb) winds of 80 knots were measured in the southern semi-circle on penetration, while a central pressure of 980 mb was recorded within an eye 40 nm in diameter.

Virginia developed winds of typhoon strength at an unusual poleward latitude of 33°N. This was only the 6th tropical cyclone since 1945 to first achieve typhoon intensity north of the 30th parallel.

As a deepening 500 mb-low approached Manchuria from the Lake Baykal area on the 13th, the accompanying downstream ridging caused the westerlies north of Virginia to weaken and retreat poleward. As a result, the typhoon continued to track northeastward in a favorable vertical shear zone to maintain its intensity. Further aircraft reconnaissance of Virginia at 13/0730Z revealed the storm was still tropical in character at the 37th parallel. The central pressure had dropped to 969 mb in an eye with a 700 mb temperature of 16C° (Figure 4-17). Maximum flight level (700 mb) winds of 90 knots were recorded just outside the eye in the wall cloud region.

By the 14th, a major trough was deepening over Manchuria causing a strong ridge to develop over the Kamchatka peninsula. By mid day, Virginia was blocked by an anomalous high pressure cell to the northeast, resulting in an unusual northwestward movement for a tropical cyclone located at such a northerly latitude (37N). Virginia's tropical lifetime ended shortly thereafter, as satellite data indicated weakening on the 15th and development of extratropical characteristics later in the day 400nm east of Hokkaido.

During the typhoon's northward track, numerous vessels in the shipping lanes were caught in its circulation and reported gale force winds. The strongest winds were experienced by a Netherlands ship (call sign PJSM) (40 knots) on the 13th and the PRESIDENT VAN BUREN (45 knots) on the 14th. The Japanese ship AKAISHI caught near the center on the 15th (0000Z) reported northeasterly winds of 57 knots and a barometer reading of 989.5 mb.

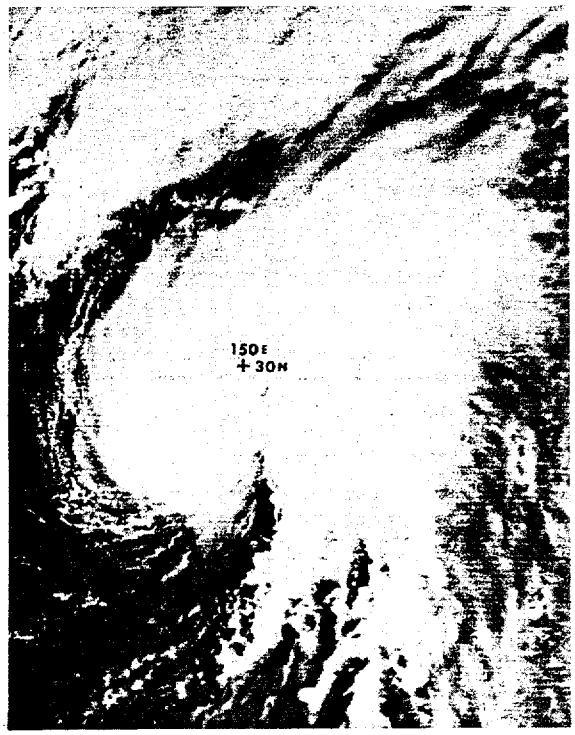

FIGURE 4-16. *Tropical Storm Virginia 370 nm northwest of Marcus Island, 11 September 1974, 2243Z. (DMSP expanded imagery)*

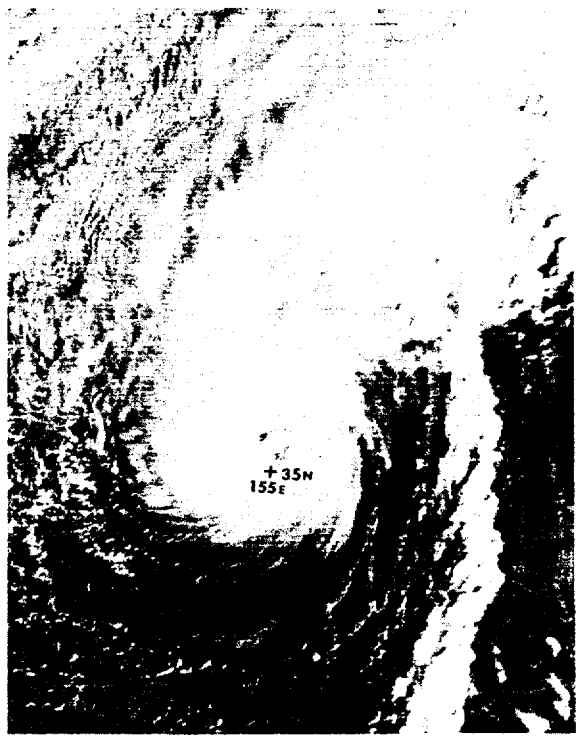

FIGURE 4-17. *Typhoon Virginia near peak intensity after crossing the 35th parallel 750 nm east of Tokyo, 13 September 1974, 2207Z. (DMSP expanded imagery)*